Volume 133 1983

Table of Contents

No. 1 1–254 issued on June 1, 1983
No. 2 255–478 issued on June 15, 1983
No. 3 479–722 issued on July 1, 1983

Revision of Enzyme Nomenclature. Listing Enzymes
Nomenclature Committee of the International Union of Biochemistry 479

Nucleic Acids, Protein Synthesis, and Molecular Genetics

Translational Barrier in Central Region of Encephalomyocarditis Virus Genome. Modulation by Elongation Factor 2 (eEF-2)
Y. V. Svitkin and V. I. Agol 145–154

The Pyruvate Dehydrogenase Complex of *Escherichia coli* K12. Nucleotide Sequence Encoding the Pyruvate Dehydrogenase Component
P. E. Stephens, M. G. Darlison, H. M. Lewis, and J. R. Guest 155–162

Characterization of Messenger RNA for Chick-Embryo DNA Polymerase β and Its Translation Product *in vitro*
M. Yamaguchi, T. Takahashi, K. Yasuda, Y. Shimura, and A. Matsukage 277–282

The Phytochrome-Controlled Accumulation of mRNA Sequences Encoding the Light-Harvesting Chlorophyll *a*/*b* Protein of Barley (*Hordeum vulgare L.*)
I. Gollmer and K. Apel 309–313

Neutron Diffraction of Chromatin in Interphase Nuclei and Metaphase Chromosomes
K. Ibel, R. Klingholz, W. H. Strätling, J. Bogenberger, and F. Fittler 315–319

Secretion of Plant Storage Globulin Polypeptides by *Xenopus laevis* Oocytes
R. Bassüner, A. Huth, R. Manteuffel, and T. A. Rapoport 321–326

Histone Acetylation in Chromatin Containing Mouse Satellite DNA
I. G. Pashev, S. I. Dimitrov, I. G. Ivanov, and G. G. Markov 379–382

Detection and Regulation of the mRNA for the Inhibitor of Extracellular cAMP Phosphodiesterase of *Dictyostelium discoideum*
C. Rossier, J. Franke, I. A. Mullens, K. J. Kelley, and R. H. Kessin 383–391

Neutron-Scattering Studies of Accurately Reconstituted Nucleosome Core Particles and the Effect of Ionic Strength on Core Particle Structure
G. J. Sibbet, B. G. Carpenter, K. Ibel, R. P. May, G. G. Kneale, E. M. Bradbury, and J. P. Baldwin 393–398

Expression of Interferon-α and Interferon-β Genes in Human Lymphoblastoid (Namalwa) Cells
J. Shuttleworth, J. Morser, and D. C. Burke 399–404

A Form of the DNA-Dependent RNA Polymerase of *Halobacterium halobium*, Containing an Additional Component, Is Able to Transcribe Native DNA
J. Madon and W. Zillig 471–474

The Pyruvate Dehydrogenase Complex of *Escherichia coli* K12. Nucleotide Sequence Encoding the Dihydrolipoamide Acetyltransferase Component
P. E. Stephens, M. G. Darlison, H. M. Lewis, and J. R. Guest 481–489

Salt-Induced Conformational Transitions in Chromatin. A Flow Linear Dichroism Study
V. L. Makarov, S. I. Dimitrov, and P. T. Petrov 491–497

Interaction between the Different Domains of Aminoacyl-tRNA and the Elongation-Factor-Tu · Kirromycin Complex
J. Guesnet, G. Parlato, and A. Parmeggiani 499–507

DNA Fragment Conformations. ^{1}H-NMR Comparative Studies of Helix-Coil Transition and Conformation of d(C-A-C-G-T-G) and d(G-T-G-C-A-C). Influence of Helix Formation on Proton Chemical Shifts
S. Tran-Dinh, J.-M. Neumann, J. Taboury, T. Huynh-Dinh, S. Renous, B. Genissel, and J. Igolen 579–589

Sequence Requirement for Transcription *in vitro* of the Human Corticotropin/β-Lipotropin Precursor Gene
M. Notake, T. Kurosaki, T. Yamamoto, H. Handa, M. Mishina, and S. Numa 599–605

Phytochrome-Mediated Regulation of Two mRNAs, Encoded by Nuclei and Chloroplasts of Ribulose-1,5-bisphosphate Carboxylase/Oxygenase
Y. Sasaki, T. Sakihama, T. Kamikubo, and K. Shinozaki 617–620

The Nucleotide Sequence of cDNA Complementary to the C_1 Component of Rat Prostatic Binding Protein
B. Delaey, L. Dirckx, B. Peeters, G. Volckaert, J. Mous, W. Heyns, and W. Rombauts 645–649

Protein Chemistry and Structure

Further Characterization of the Three Polypeptide Chains of Bovine and Human Short-Chain Collagen (Intima Collagen)
R. Jander, J. Rauterberg, and R. W. Glanville 39–46

Interaction of a Coenzyme Analog with Aspartate Aminotransferase Isoenzymes in the Crystal
S. Ottonello, A. Mozzarelli, G. L. Rossi, D. Carotti, and F. Riva 47–49

The Refined Structure of the Selenoenzyme Glutathione Peroxidase at 0.2-nm Resolution
O. Epp, R. Ladenstein, and A. Wendel 51–69

Semisynthesis of Phospholipase A_2. The Effect of Substitution of Amino-Acid Residues at Positions 6 and 7 in Bovine and Porcine Pancreatic Phospholipases A_2 on Catalytic and Substrate-Binding Properties
G. J. M. van Scharrenburg, W. C. Puijk, G. H. de Haas, and A. J. Slotboom 83–89

p-Hydroxybenzoate Hydroxylase from *Pseudomonas fluorescens*. 1. Completion of the Elucidation of the Primary Structure
J. Hofsteenge, W. J. Weijer, P. A. Jekel, and J. J. Beintema 91–108

p-Hydroxybenzoate Hydroxylase from *Pseudomonas fluorescens*. 2. Fitting of the Amino-Acid Sequence to the Tertiary Structure
W. J. Weijer, J. Hofsteenge, J. J. Beintema, R. K. Wierenga, and J. Drenth 109–118

Calcium-Binding Proteins from Human Platelets. A Study Using Crossed Immunoelectrophoresis and $^{45}Ca^{2+}$
G. O. Gogstad, M.-B. Krutnes, and N. O. Solum 193–199

Localisation of the Active Site of Pyruvate Carboxylase by Electron Microscopic Examination of Avidin-Enzyme Complexes
W. Johannssen, P. V. Attwood, J. C. Wallace, and D. B. Keech 201–206

Characterization of a Salivary Agglutinin Reacting with a Serotype *c* Strain of *Streptococcus mutans*
T. Ericson and J. Rundegren 255–261

Characterization of the Trimeric, Self-Recognizing *Geodia cydonium* Lectin I
W. E. G. Müller, J. Conrad, C. Schröder, R. K. Zahn, B. Kurelec, K. Dreesbach, and G. Uhlenbruck 263–267

On the Probable Involvement of Arginine Residues in the Bile-Salt-Binding Site of Human Pancreatic Carboxylic Ester Hydrolase
D. Lombardo, D. Campese, L. Multigner, H. Lafont, and A. De Caro 327–333

The Core Protein of Alphaviruses. 1. Purification of Peptides and Complete Amino-Acid Sequence of Semliki Forest Virus Core Protein
U. Boege, G. Wengler, and B. Wittmann-Liebold 405–414

The Core Protein of Alphaviruses. 2. Purification of Peptides and Complete Amino-Acid Sequence of Sindbis Virus Core Protein
U. Boege, G. Wengler, and B. Wittmann-Liebold 415–426

Serine Proteinase Inhibitors from *Vipera ammodytes* Venom. Isolation and Kinetic Studies
A. Ritonja, V. Turk, and F. Gubenšek 427–432

Ca^{2+} and Mg^{2+}-Dependent Complex Formation of Tropomyosin with Phosphotroponin (P^1TI_2C) or Dephosphotroponin (TI_2C)
U. Jahnke and L. M. G. Heilmeyer, Jr 591–597

Polymorphism of α-Actinin. Electrophoretic and Immunological Studies of Rabbit Skeletal Muscle α-Actinins
R. Kobayashi, H. Itoh, and Y. Tashima 607–611

The Amino-Acid Sequence of a Purothionin from *Triticum monococcum*, a Diploid Wheat
B. L. Jones and A. S. Mak 621–625

Enzymology

Activity of Human Blood Platelets in Prothrombin and in Factor X Activation Induced by Ionophore A23187
J. van Rijn, J. Rosing, and G. van Dieijen 1–10

Fully Active Fe-Protein of the Nitrogenase from *Azotobacter vinelandii* Contains at least Eight Iron Atoms and Eight Sulphide Atoms per Molecule
A. Braaksma, H. Haaker, and C. Veeger 71–76

Purification and Properties of 2-Aminoethylphosphonate:Pyruvate Aminotransferase from *Pseudomonas aeruginosa*
C. Dumora, A.-M. Lacoste, and A. Cassaigne 119–125

The Binding of Glucose to Native and Proteolytically Modified Yeast Hexokinase PI
E. L. Mayes, J. G. Hoggett, and G. L. Kellett 127–134

6-Phosphogluconolactonase. Purification, Properties and Activities in Various Tissues
H. P. Bauer, T. Srihari, J. C. Jochims, and H.-W. Hofer 163–168

The αβ-Methylene Analogues of ADP and ATP Act as Substrates for Creatine Kinase. ΔG_0 for this Reaction and for the Hydrolysis of the αβ-Methylene Analogue of ATP
E. J. Milner-White and D. S. Rycroft 169–172

Isolation and Characterization of Multiforms of Aldehyde Reductase in Chicken Kidney
A. Hara, Y. Deyashiki, T. Nakayama, and H. Sawada 207–214

Carboxylesterases in Rat and Human Sera and Their Relationship to Serum Aryl Acylamidases and Cholinesterases
T. Tsujita and H. Okuda 215–220

Substrate Specificity of the Human Splenic Non-specific Soluble β-Glucosidase
A. Maret, R. Salvayre, A. Negre, and L. Douste-Blazy 283–287

Improved Purification and Further Characterization of Acetyl-CoA Carboxylase from Culture Cells of Parsley (*Petroselinum hortense*)
B. Egin-Bühler and J. Ebel 335–339

Interaction of the Dissociable Glycerol-3-phosphate Dehydrogenase and Fructose-1,6-bisphosphate Aldolase. Quantitative Analysis by an Extrinsic Fluorescence Probe
J. Ovádi, I. R. Mohamed Osman, and J. Batke 433–437

Characterisation of a Reconstituted Mg-ATP-Dependent Protein Phosphatase
T. J. Resink, B. A. Hemmings, H. Y. L. Tung, and P. Cohen 455–461

The Reactivity of Arginine Residues Interacting with Glucose 1-Phosphate in Glycogen Phosphorylase. A Comparison between Pyridoxal-Reconstituted Phosphorylase and the Native Enzyme
B. Vandenbunder and H. Buc 509–513

Kinetic Studies of Aminoglycoside Acetyltransferase and Phosphotransferase from *Staphylococcus aureus* RPAL. Relationship between the Two Activities
A. Martel, M. Masson, N. Moreau, and F. Le Goffic 515–521

Molecular Forms of β-*N*-Acetyl-hexosaminidase in Epstein-Barr Virus-Transformed Lymphoid Cell Lines from Normal Subjects and Patients with Tay-Sachs Disease
R. Salvayre, A. Maret, A. Negre, G. Lenoir, M. Vuillaume, J. Icart, J. Didier, and L. Douste-Blazy 627–633

Bovine Lens γ-Glutamylcysteine Synthetase. Inhibition by Glutathione and Adenine Nucleotides
J. E. Gander, S. S. Sethna, and W. B. Rathbun 635–640

Synergism between Coenzyme and Aldehyde Binding to Liver Alcohol Dehydrogenase
P. Andersson, J. Kvassman, B. Olden, and G. Pettersson 651–655

Some Kinetic Properties of 4-Hydroxyphenyl-pyruvate Dioxygenase from *Pseudomonas* sp. Strain P.J. 874
M. Rundgren 657–663

Hysteretic Behaviour of Citrate Synthase. Alternating Sites during the Catalytic Cycle
G. Löhlein-Werhahn, E. Bayer, B. Bauer, and H. Eggerer 665–672

Purification and Some Properties of Bacteriophage T4 Particle-Associated Lysozyme
B. Szewczyk and R. Skórko 717–722

Carbohydrates, Lipids and Other Natural Products

Chemically Synthesized Galactosyl Ficaprenyl Diphosphate as an Intermediate in the Biosynthesis of the *Salmonella* O-Antigenic Polysaccharide
S. Kanegasaki, A. Wright, and C. D. Warren 77– 81

Improved Preparation of Lipoteichoic Acids
W. Fischer, H. U. Koch, and R. Haas 523–530

Porphyran Primary Structure. An Investigation Using β-Agarase I from *Pseudomonas atlantica* and ^{13}C-NMR Spectroscopy
L. M. Morrice, M. W. McLean, W. F. Long, and F. B. Williamson 673–684

Aberrant Migration of Lipopolysaccharide in Sodium Dodecyl Sulfate/Polyacrylamide Gel Electrophoresis
P. J. Hitchcock 685–688

Physical Biochemistry

Time-Dependent Fluorescence Intensity and Depolarization of Diphenylhexatriene in Micellar Complexes of Apolipoprotein C-I and Dimyristoylglycerophosphocholine
A. Jonas, J.-P. Privat, and P. Wahl 173–177

Binding of Ethidium Bromide to Self-Complementary Deoxydinucleotides
S. Doglia, Å. Gräslund, and A. Ehrenberg 179–184

Structural Investigations of the Mg · ATP Complex at the Active Site of Porcine Adenylate Kinase Using Phosphorothioate Analogs and Electron Paramagnetic Resonance of Mn(II) with Chiral ^{17}O-Labelled ATP Analogs
H.-R. Kalbitzer, R. Marquetant, B. A. Connolly, and R. S. Goody 221–227

On the Mobility of Riboflavin 5′-Phosphate in *Megasphaera elsdenii* Flavodoxin as Studied by ^{13}C-Nuclear-Magnetic-Resonance Relaxation
C. T. W. Moonen and F. Müller 463–470

Quaternary Structure and Spin Equilibria in Ferric Hemoglobins. A Room Temperature Study
R. W. Noble, A. De Young, E. Di Iorio, K. H. Winterhalter, M. Cerdonio, S. Morante, and S. Vitale 475–478

The Accessibility of the Active Site and Conformation States of the β_2 Subunit of Tryptophan Synthase Studied by Fluorescence Quenching
A. N. Lane 531–538

Membranes and Bioenergetics

Calcium-Independent Activation of Adenylate Cyclase by Calmodulin
M.-C. Kilhoffer, G. Hope Cook, and J. Wolff 11– 15

Patterns of Amino Acids near Signal-Sequence Cleavage Sites
G. von Heijne 17– 21

Inactivation-Reactivation Process and Repression of Permease Formation Regulate Several Ammonia-Sensitive Permeases in the Yeast *Saccharomyces cerevisiae*
M. Grenson 135–139

Study of the Positive Control of the General Amino-Acid Permease and Other Ammonia-Sensitive Uptake Systems by the Product of the *NPR1* Gene in the Yeast *Saccharomyces cerevisiae*
M. Grenson 141–144

The Relationship between Extramitochondrial Ca^{2+} Concentration, Respiratory Rate, and Membrane Potential in Mitochondria from Brown Adipose Tissue of the Rat
J. Nedergaard 185–191

Fusion of Sulfatide-Containing Vesicles of Phosphatidylcholine
B. Cestaro, G. Cervato, L. Barenghi, E. Pistolesi, and G. Pizzini 229–233

The Effects of Octylglucoside on the Interactions of Chloroplast Coupling Factor 1 (CF_1) with Adenine Nucleotides
U. Pick and S. Bassilian 289–297

Transport of Methionine in Sea-Urchin Sperm by a Neutral Amino-Acid Carrier
C. Gache and V. D. Vacquier 341–347

Localization of Ellipticine Derivatives Interacting with Membranes. A Fluorescence-Quenching Study
F. Terce, J.-F. Tocanne, and G. Laneelle 349–354

Properties and Reconstitution of a Cytochrome Oxidase Deficient in Subunit III
T. Penttilä 355–361

Characterization of Benextramine as an Irreversible α-Adrenergic Blocker and as a Blocker of Potassium-Activated Calcium Channels
Y. Plotek and D. Atlas 539–544

Brain Proteolipids. Isolation, Purification and Effect on Ionic Permeability of Membranes
G. Helynck, B. Luu, J.-L. Nussbaum, D. Picken, G. Skalidis, E. Trifilieff, A. Van Dorsselaer, P. Seta, R. Sandeaux, C. Gavach, F. Heitz, D. Simon, and G. Spach 689–695

Cellular Biochemistry and Metabolism

Nuclear Matrix: A Cell-Cycle-Dependent Site of Increased Intranuclear Protein Phosphorylation
S. M. Henry and L. D. Hodge 23– 29

Synthesis of α_1-Microglobulin by Guinea-Pig Liver
B. Åkerström 235–239

Control of Rat-Liver Glutaminase by Ammonia and pH
A. J. Verhoeven, J. F. van Iwaarden, S. K. Joseph, and A. J. Meijer 241–244

Bicarbonate and the Pathway of Glutamate Oxidation in Isolated Rat-Liver Mitochondria
R. J. A. Wanders, A. J. Meijer, A. K. Groen, and J. M. Tager 245–254

Hepatocyte Heterogeneity in Glutamine and Ammonia Metabolism and the Role of an Intercellular Glutamine Cycle during Ureogenesis in Perfused Rat Liver
D. Häussinger 269–275

Acyl-Coenzyme A: Cholesterol Acyltransferase. Transfer of Cholesterol to Its Substrate Pool and Modulation of Activity
S. Synouri-Vrettakou and K. A. Mitropoulos 299–307

Partial Purification of Rat and Human Serum Factors Inhibiting the G_1-S Transition in Rat Hepatocytes
G. Auger, D. Blanot, J. Van Heijenoort, C. Nadal, and M.-F. Gournay 363–369

N-Acetylmuramoyl-L-alanine Amidase of *Escherichia coli* K12. Possible Physiological Functions
C. Parquet, B. Flouret, M. Leduc, Y. Hirota, and J. Van Heijenoort 371–377

Conformational Changes of Apigenin 7-*O*-(6-*O*-malonylglucoside), a Vacuolar Pigment from Parsley, with Solvent Composition and Proton Concentration
U. Matern, W. Heller, and K. Himmelspach 439–448

Biosynthesis of the Major Glycoprotein Associated with Zymogen-Granule Membranes in the Pancreas
J. R. Havinga, G. J. A. M. Strous, and C. Poort 449–454

9,10-Dihydrophenanthrenes as Phytoalexins of Orchidaceae. Biosynthetic Studies *in vitro* and *in vivo* Proving the Route from L-Phenylalanine to Dihydro-*m*-coumaric Acid, Dihydrostilbene and Dihydrophenanthrenes
K.-H. Fritzemeier and H. Kindl 545–550

The Sub-Cellular Localisation of Pyruvate Carboxylase and of Some Other Enzymes in *Aspergillus nidulans*
S. A. Osmani and M. C. Scrutton 551–560

The Biosynthesis of Acute-Phase Proteins in Primary Cultures of Rat Hepatocytes
T. Andus, V. Gross, T.-A. Tran-Thi, G. Schreiber, M. Nagashima, and P. C. Heinrich 561–571

A Simple Model for Studies on the Regulation of Cholesterol Synthesis Using Freshly Isolated Hepatocytes
G. Cighetti, G. Galli, and M. Galli Kienle 573–578

Metabolism of N^8-Monoacetylspermidine in Rat Hepatoma Cells. Investigation of Its Effect on the Activity of L-Ornithine Decarboxylase
P. S. Mamont, A.-M. Joder-Ohlenbusch, and M. Siat 613–616

The Precursor of Rat Liver Mitochondrial Glutamate Dehydrogenase has Enzymatic Activity
V. Felipo, V. Miralles, E. Knecht, J. Hernandez-Yago, and S. Grisolia 641–644

Developmental Biochemistry and Immunology

Relationship of Collagen-Tailed Acetylcholinesterase with Basal Lamina Components. Absence of Binding with Laminin, Fibronectin, and Collagen Types IV and V and Lack of Reactivity with Different Anti-Collagen Sera
J. Grassi, J. Massoulié, and R. Timpl 31– 38

The Use of Alginate Ester Films on Solid Supports in the Preparation of Water-Insoluble Immunoadsorbents for Purification of Antigens
J. F. Kennedy, J. A. Barnes, and S. A. Barker 697–705

Induction of Differentiation in a Rat Mammary Epithelial Stem Cell Line by Dimethyl Sulphoxide and Mammotrophic Hormones
M. J. Warburton, L. P. Head, S. A. Ferns, and P. S. Rudland 707–715

Indexed in Current Contents